

## BOOK REVIEW

FLOODS: PHYSICAL PROCESSES AND HUMAN IMPACTS by K. Smith and R. Ward, John Wiley, Chichester 1998. No. of pages: 382.

The high profile accorded to natural hazards by the international media results in constant news coverage. There is therefore no especially appropriate time to publish a new monograph on flooding. The authors, in their preface to *Floods: Physical Processes and Human Impacts*, state that 'the current understanding of floods represents a plateau of knowledge which, as the 1990s International Decade of Natural Disaster Reduction draws to a close, is well worth summarising'. This justification for publication is sound but it is a matter of regret that the IDNDR has had such a low profile and rarely rates a mention as the media report the latest disastrous flood event—recently these have included 290 million people directly affected in China, thousands of deaths in central America and a devastating tsunami in Papua New Guinea.

As would be expected from the background of the two authors, the treatment is geographical. The work is amply illustrated with maps and diagrams, worldwide examples and a comprehensive bibliography. Evidence of the 'plateau of knowledge' is clear. Techniques to assess the nature of all forms of flood hazard, to evaluate vulnerability and to assess the array of available mitigation measures are all well described and understood. The plateau is also apparent in that fully half of the illustrations are over ten years old and many others even older.

The tragedy of flood impacts is why flood losses, tangible and intangible, still continue to escalate given our background understanding of the processes and techniques for assessment and mitigation. The authors wrestle long and hard with this conundrum and conclude that '... in the newly industrialised countries, rising flood problems are a telling indicator of unsustainability'. They opine that this must be tackled by individual communities developing their own capacity and self-reliance within the ambit of national strategies and standards. Easy to say, hard to encourage and even more difficult to implement.

The monograph presents a wide coverage of all forms of flood: riverine, storm surge and tsunamis for countries at all levels of economic development. Inevitably readers will find that, for countries with which they are familiar, the policies described have been modified. From an antipodean perspective, the generous governmental disaster provisions of yesteryear in New Zealand (from the Earthquake and War

Damage Commission) are now consigned to history. Local government in New Zealand is now required to insure on the open market for losses to infrastructure. Also, the almost total absence of residential flood insurance in Australia is worth a mention, if only because it belies the common belief elsewhere that householders would be more hazard aware in the absence of insurance. They are not!

Personally I would like to have seen more discussion of the risk, legislative problems and warnings systems for flooding from dam failure. I was also surprised to see that reference to the excellent text by McMahon *et al.* (1992) was omitted. The question of public policy for floodplain management is dealt with in a descriptive and qualitative manner and would have had a tighter focus if the work of Peter May and his colleagues (May *et al.*, 1996) had been included. I was personally flattered to be quoted as producing one of the first computer-generated maps of urban flood damage, in 1980. However, it would have been more valuable to provide a longer discussion of the role that Geographical Information Systems have in improving flood loss reduction and mitigation. Admittedly, GIS is only an additional tool, but a longer discussion of its pros and cons would have been a useful inclusion.

It is, however, easy for individual reviewers to point to shortcomings in a text that aims to give a world coverage. Overall the book represents a comprehensive review of flood hazard, vulnerability and mitigation which will form an invaluable guide for undergraduate teaching. Smith and Ward have produced a study that summarizes the corpus of knowledge on flooding as the current century closes. The hope is that the next century will see the better application of the expertise accumulated over the last sixty years or so.

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### REFERENCES

- McMahon T. A. *et al.* 1992. 'Global runoff – continental comparisons of annual flood and peak discharges', Catena, Cremlingen-Destedt.  
May, P. J. *et al.* 1996. Environmental Management and Governance: inter-governmental approaches to hazards and sustainability, Routledge, London.